

Change No. 1

Headquarters
Department of the Army
Washington, DC, 8 September 2014

Risk Management

1. This change replaces DD Form 2977 (Deliberate Risk Assessment Worksheet).
2. ATP 5-19, 14 April 2014 is changed as follows:

Remove Old Pages

Pages i through ii
Pages 1-7 through 1-8
Pages A-1 through A-10

Insert New Pages

Pages i through ii
Pages 1-7 through 1-8
Pages A-1 through A-13

4. File this transmittal sheet in front of the publication for reference purposes.

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ATP 5-19, C1
8 September 2014

By order of the Secretary of the Army:

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Risk Management

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*This publication supersedes FM 5-19, 21 August 2006.

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- Estimate the probability of a harmful event or occurrence from a hazard.
- Estimate the expected severity of an event or occurrence.
- Determine the level of risk for the estimated probability and severity.

Table 1-1. Risk assessment matrix

Risk Assessment Matrix		Probability (<i>expected frequency</i>)				
		Frequent: Continuous, regular, or inevitable occurrences	Likely: Several or numerous occurrences	Occasional: Sporadic or intermittent occurrences	Seldom: Infrequent occurrences	Unlikely: Possible occurrences but improbable
Severity (<i>expected consequence</i>)		A	B	C	D	E
Catastrophic: <i>Mission failure, unit readiness eliminated; death, unacceptable loss or damage</i>	I	EH	EH	H	H	M
Critical: <i>Significantly degraded unit readiness or mission capability; severe injury, illness, loss or damage</i>	II	EH	H	H	M	L
Moderate: <i>Somewhat degraded unit readiness or mission capability; minor injury, illness, loss, or damage</i>	III	H	M	M	L	L
Negligible: <i>Little or no impact to unit readiness or mission capability; minimal injury, loss, or damage</i>	IV	M	L	L	L	L
Legend: EH - Extremely High Risk H - High Risk M - Medium Risk L - Low Risk						

First Substep of Step 2—Estimate the Probability of an Occurrence

1-31. Probability is an estimate, based on the information known about the hazard and on the hazard-related occurrences experienced by others in similar situations. The RM practitioner estimates the probability levels of harmful events occurring for each hazard, taking into account all relevant factors—including the mission, scheme of maneuver, and frequency of similar occurrences. Probability estimates take into account the current situation and previous similar situations. For the purpose of RM, the five levels of probability are—

- Frequent (A).
- Likely (B).
- Occasional (C).
- Seldom (D).
- Unlikely (E).

Frequent

1-32. Probability is assessed as frequent if a harmful occurrence is known to happen continuously, regularly, or inevitably because of exposure. **Exposure is the frequency and length of time personnel and equipment are subjected to a hazard or hazards.** For example, given about 500 exposures, without proper controls, a harmful event will occur. Increased exposure—during a certain activity or over iterations of the activity—increases risk. An example of frequent occurrence is a heat injury during a battalion physical training run, with a category 5 heat index and nonacclimated Soldiers.

Likely

1-33. Probability is assessed as likely if a harmful occurrence is expected to happen several or numerous times—the event commonly happens because of exposure. For example, given about 1,000 exposures, without proper controls, the harmful event will occur at some point. Examples include detonation of improvised explosive devices, wire strikes for aircraft, controlled flights into terrain, and unintentional weapons discharges.

Occasional

1-34. Probability is assessed as occasional if a harmful occurrence is expected to happen sporadically or intermittently because of exposure—the event is neither common nor uncommon. A unit may or may not complete a deployment without the harmful event happening. Examples include unexploded ordnance detonation and *fratricide*—the unintentional killing or wounding of friendly or neutral personnel by friendly firepower (ADRP 3-37).

Seldom

1-35. Probability is assessed as seldom when a harmful occurrence resulting from exposure is infrequent—the event is remotely possible and could occur at some time. Usually, several things must go wrong at once for the harmful event to happen. Examples include heat-related death in a temperate environment or electrocution by low voltage.

Unlikely

1-36. Probability is assessed as unlikely if a harmful occurrence resulting from exposure is possible but improbable. Planners assume it will not occur, but the occurrence is not impossible. Examples might include detonation of containerized ammunition during transport.

Second Substep of Step 2—Estimate the Expected Severity of an Occurrence

1-37. A severity level is a prediction of the effects of a harmful event on combat power, mission capability, or readiness. The severity level does not consider probability; severity is an estimate of the loss that would follow the envisioned event. The RM practitioner estimates the level of severity for each anticipated occurrence based on knowledge of the results of similar past occurrences. For the purpose of RM, severity is assessed at one of four levels:

- Catastrophic (I).
- Critical (II).
- Moderate (III).
- Negligible (IV).

Catastrophic

1-38. Severity is estimated as catastrophic when consequences of an event, if it occurs, are expected to include death, unacceptable loss or damage, mission failure, or the loss of unit readiness.

Appendix A

Sample DD Form 2977 and Instructions

This appendix discusses requirements for documenting deliberate risk management. It describes the overall structure of the prescribed form. It supports application of risk management techniques in tactical tasks by illustrating use of the prescribed form.

DOCUMENTING RISK MANAGEMENT

A-1. DD Form 2977 is the Army's standard form for deliberate risk assessment. Aviation; explosive; chemical, biological, radiological, or nuclear; and other highly technical activities may require additional specialized documentation. However, when coordination may occur across sections or commands, DD Form 2977 is the standard for the majority of Army operations. It allows units to track hazards and risks in a logical manner. Army forces use this form to document risk management (RM) steps taken during planning, preparation, and execution of any type of operation, including training and combat. DD Form 2977 is designed for the entire Army and the other Services. It provides standardization for joint operations and assignments. It may be filled out electronically or free hand. It is the standard way of capturing the information analyzed during the five steps of RM. It helps the user in thinking through the five steps and then sharing the resulting assessment. It is a living document. Pen and pencil changes on hard copies are acceptable and encouraged since changes will occur during operations.

STRUCTURE OF THE FORM

A-2. DD Form 2977 is available electronically at the [Official Web Site for Department of Defense Forms](#). DD Form 2977 consists of three or more pages (see examples in figures A-1 through A-6, beginning on page A-4). The first page provides areas for identifying the operation or mission, preparer information, an area to capture information used in the five steps of RM, identification of the overall residual risk level, and approval authority information. Block 1 (*Mission/Task Description*) should include the date or dates of the mission, whereas block 2 (*Date*) expresses the date the form was prepared. Blocks 4 through 9 may be reproduced or reduced by row through the use of the (+) and (-) buttons. New rows will be placed below all existing rows and reductions will always occur from the top. The user may reproduce these blocks as many times as needed to capture all tasks, subtasks, and identified hazards. The second page provides a standard risk assessment matrix, an area for review (used for ongoing operations), an area to capture feedback and lessons learned, and an area for additional comments or remarks. The third page provides instructions for completing each block of the form. Several blocks will expand in order to capture all input from the preparer or approval authority. Block expansion, coupled with additional blocks 4 through 9 will often result in additional form pages. Page numbers, found at the bottom of the pages, will change as needed to account for expansion.

EXAMPLES OF OPERATIONAL USE OF DD FORM 2977

A-3. This appendix presents a road march scenario, an aviation scenario, and a tactical field artillery scenario. Each scenario is accompanied by a form with sample data.

APPLICATION OF RISK MANAGEMENT IN TACTICAL TASKS

A-4. RM is a universal process used for managing risk at every level of effort from the individual to large units or organizations. Its application is blind to the cause of the hazard. Whether it comes directly as the result of an enemy action or threat-based activity or as the result of other factors (hazard-based), RM attempts to identify, assess, and control factors that may adversely affect the capabilities of a military unit

or organization. Additionally, RM application ensures the leader at the appropriate level approves the action or operation.

Note. The risk approval authority may be different within different theatres or commands. Commanders may reserve the right to approve certain missions (despite a lower residual risk).

A-5. This appendix provides general, notional examples. They are not deliberate risk assessments that have been used in operations. To view deliberate RM worksheets that have been used in operations, access the current RM tool at the [United States Army Combat Readiness/Safety Center Web site](#).

TACTICAL ROAD MARCH SCENARIO

A-6. This notional tactical road march scenario, page A-3, is the basis for the sample DD Form 2977 illustrated in figures A-1 and A-2, pages A-4 and A-5.

Conduct a Tactical Road March

Unit's mission. Company A, 3-69 Armor, conducts a tactical road march along ROUTE PACKERS to occupy the zone of separation designated by the United Nations no later than 0300Z July 20XX, to conduct peace enforcement operations.

Situation. The battalion intelligence staff officer produced an intelligence overlay indicating the presence of many known (marked) and unknown (unmarked) minefields throughout your area of operations and spanning your route of march. Intelligence indicates enemy armed forces are operating in three- to five-person reconnaissance teams. Contact with the enemy is unlikely, but if made, the enemy is expected to break contact and not fight.

Conditions. As the company commander of A Company, 3-69 Armor, you have just received a warning order dated 011400 July 20XX from your battalion commander. The unit has been in country for ten days and is combat-ready. The battalion conducted extensive predeployment training. It is prepared for the terrain, consisting of moderately sized rolling hills and cool, wet conditions. The roads are unimproved, with sharp curves and steep embankments. Temperatures have been in the mid-50s to 60s during the day and mid-40s at night, with four straight days of rain.

Facts.

- The company commander and platoon leaders have been assigned ten months.
- The company is task-organized into two tank platoons and one mechanized platoon with an engineer section (with combat engineer vehicles and armored combat earthmovers, an air defense artillery section, and a military police section).
- The two tank platoons do not have mine rollers.
- The two tank platoons and mechanized platoon are used to working together.
- The other elements were assigned when you entered the theater.
- All vehicles are in good condition.
- Map reconnaissance indicates the objective is 20 kilometers away.

Mission analysis.

- Terrain and weather. The roads are unimproved, with sharp curves and steep embankments. They are generally bordered by open terrain that would provide little cover and concealment for dismounted troops. The weather forecast calls for rain to continue several days. Overcast conditions will limit natural illumination.
- Enemy. Enemy armed forces are operating in three-to-five person reconnaissance teams equipped with direct weapons (individual weapons, machine guns, and a very limited number of outdated anti-tank rockets and anti-armor weapons).
- Troops. Experience level is high within the tank and mechanized units. The experience level of the troops recently attached to you is unknown.
- Civil considerations. The area is sparsely populated and the local nationals are supportive of our mission.
- Time. 13 hours to start point.

Risk assessment.

- Threat-based risks. Land mine potential; small arms antitank rocket ambush.
- Hazard-based risks. Rain and cold, limited visibility, limited surface traction, narrow roads, fatigue of troops, and inexperienced personnel.

Appendix A

DELIBERATE RISK ASSESSMENT WORKSHEET						
1. MISSION/TASK DESCRIPTION					2. DATE (DD/MM/YYYY)	
Conduct Tactical Road March (Rte. Packers) (02/07/20XX - 03/07/20XX)					01/07/20XX	
3. PREPARED BY						
a. Name (Last, First Middle Initial)			b. Rank/Grade	c. Duty Title/Position		
Smith, John Q.			ILT / O-2	Platoon Leader		
d. Unit	e. Work Email			f. Telephone (DSN/Commercial (Include Area Code))		
A/3-69 AR	john.q.smith.mil@mail.mil			000-5456 / (555) 000-5456		
g. UIC/CIN (as required)	h. Training Support/Lesson Plan or OPORD (as required)			i. Signature of Preparer		
W3YTA	OPORD XX-001			DIGITAL SIGNATURE 123456789		
Five steps of Risk Management: (1) Identify the hazards (2) Assess the hazards (3) Develop controls & make decisions (4) Implement controls (5) Supervise and evaluate (Step numbers not equal to numbered items on form)						
4. SUBTASK/SUBSTEP OF MISSION/TASK	5. HAZARD	6. INITIAL RISK LEVEL	7. CONTROL		8. HOW TO IMPLEMENT/WHO WILL IMPLEMENT	9. RESIDUAL RISK LEVEL
N/A + -	Land mines	H	Move clearing teams to front of convoy.		How: SOP and Rehearsal Who: Platoon Leader	M
	Limited visibility (Night Operations)		Reduce vehicle speed and increase vehicle spacing. NVG use mandated for drivers.		How: PCI and Rehearsal Who: Platoon Leader	
N/A + -	Surface traction capability	H	Reduce vehicle speed and increase vehicle spacing.		How: OPORD and Rehearsal Who: Platoon Leader	M

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Figure A-1. Sample DD Form 2977 for tactical road march scenario (page 1)

	4. SUBTASK/SUBSTEP OF MISSION/TASK	5. HAZARD	6. INITIAL RISK LEVEL	7. CONTROL	8. HOW TO IMPLEMENT/WHO WILL IMPLEMENT	9. RESIDUAL RISK LEVEL
	N/A	Road width	M	Set map control check points.	How: OPORD and Rehearsal Who: Platoon Leader	L
	N/A	Rain and cold	M	Ensure all personnel have and wear rain gear, extra dry socks, and gloves.	How: PCI and Rehearsal Who: Each Platoon Sergeant	L
10. OVERALL RESIDUAL RISK LEVEL (All controls implemented): <input type="checkbox"/> EXTREMELY HIGH <input type="checkbox"/> HIGH <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> LOW						
11. OVERALL SUPERVISION PLAN AND RECOMMENDED COURSE OF ACTION <p>Leaders will brief all identified hazards and associated controls at briefings, check equipment requirements during PCIs, and review all likely scenarios during rehearsals. Any unresolved issues will be elevated through the chain of command.</p>						
12. APPROVAL OR DISAPPROVAL OF MISSION OR TASK <input checked="" type="checkbox"/> Approve <input type="checkbox"/> Disapprove						
a. Name (Last, First, Middle Initial)	b. Rank/Grade	c. Duty Title/Position	d. Signature of Approval Authority			
Doe, John J.	LTC / O-5	Battalion Commander	DIGITAL SIGNATURE 123456789			
e. Additional Guidance: Company commander provides status update to BN S-3 prior to LD.						

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Figure A-2. Sample DD Form 2977 for tactical road march scenario (page 2)

TACTICAL AVIATION SCENARIO

A-7. This notional tactical aviation scenario, page A-6, is the basis for the sample DD Form 2977 illustrated in figures A-3 and A-4, pages A-8 and A-9. The sample illustrates only the first two pages of the form.

Relocate a Forward-Area Refueling Point

Unit's Mission. The petroleum, oils, and lubricants (POL) and ordnance platoon (3-5 Platoon), F Company, 1-3 Combat Aviation Brigade (CAB) (Attack), will conduct forward area refueling point (FARP) operations to support a nighttime AH-64D Apache Longbow deep attack mission. The FARP will relocate using four 2-3 CAB UH-60 Black Hawk helicopters. Movement will be from (NK 560029) to (NK 598031) and have the FARP operational no later than 040230 Sep XX. Expected operation at location will be 12–24 hours.

Situation. The Peoples' Army of Moldavia has stepped up operational tempo in your area. Since their last forward advance, enemy artillery has become a greater threat to the assets of 3rd CAB. Enemy strength continues to increase with new conscripts. Friendly patrols have discovered new enemy positions constructed for air defense artillery or surface-to-air missiles. If enemy sites become operational, friendly aviation operations will be in serious jeopardy.

Conditions. The F Company 3-5 Platoon leader was at the National Training Center two weeks and has been conducting tactical tasks only three days. It is now 032100 Sep XX, and orders are to emplace a jump FARP and have it operational by 040230 Sep XX. Four UH-60s are on site to move all equipment and eight personnel to the location. There are four 500-gallon fuel blivets, and the requirement is to operate four refueling points at once, using two forward air refueling equipment systems. The platoon is seriously over-extended, with other commitments to the battalion and only eight people to accomplish this mission. Two have recently transferred in from 16th CAB, have had minimal training with the unit, and have never conducted FARP operations with AH-64Ds. The weather has been dry and hot, with no forecasted precipitation. The temperature is averaging 93 degrees Fahrenheit during the day and 68 degrees Fahrenheit at night. There will be moderate illumination during the operation.

Facts. As the 3-5 Platoon leader for the four months, you have planned and participated in two field training exercises before this National Training Center rotation. The squad leaders have conducted risk assessments; therefore, you know the following:

- Results from the safety risk assessment identified 10 percent of the platoon's Soldiers at a high or extremely high risk level for accidents (below standards due to lack of training and self-discipline issues).
- The platoon has supported numerous FARP and POL support missions over the past year, but only two were night operations using night-vision devices.
- The new FARP location has sparse vegetation and scrub brush. Dust and brownout conditions are likely. No one from the platoon is familiar with this site.

Mission analysis.

- Mission. Relocate FARP operations to support an AH-64 night deep attack.
- Enemy. Possesses indirect artillery with capability to effectively engage jump FARP site and possible air defense artillery and surface-to-air missile capabilities. Enemy scout elements with modified civilian pick-up trucks and small arms may be in the area.
- Terrain. Plateau affords easy access, but is exposed on all sides. The weather is dry and hot, with no forecasted precipitation. The temperature is averaging 93 degrees Fahrenheit during the day and 68 degrees Fahrenheit at night. There will be moderate moon illumination throughout the operational time period.
- Troops. Two of your troops have little or no experience performing this task. Most of the Soldiers are first term enlistees with less than 3 years of service. Previous training assessments indicate acceptable levels of proficiency for six of the Soldiers. Number of available Soldiers to accomplish the mission is limited due to over extended support commitments.
- Time. Lack of training time due to enemy threat.

Risk assessment.

- Threat-based risks. Air defense artillery threat; terrain exposed to enemy fire (direct and indirect).
- Hazard-based risks. insufficient and inexperienced personnel; limited visibility and unfamiliar terrain.

Appendix A

DELIBERATE RISK ASSESSMENT WORKSHEET															
1. MISSION/TASK DESCRIPTION Relocate and Conduct Jump FARP Ops. (04/09/20XX)					2. DATE (DD/MM/YYYY) 03/09/20XX										
3. PREPARED BY <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> a. Name (Last, First Middle Initial) Public, Robert W. </td> <td style="width: 33%;"> b. Rank/Grade ILT / O-2 </td> <td style="width: 33%;"> c. Duty Title/Position 3/5 Platoon Leader </td> </tr> <tr> <td style="width: 33%;"> d. Unit F Company, 1-3 CAB (Atk) </td> <td style="width: 33%;"> e. Work Email robert.w.public.mil@mail.mil </td> <td style="width: 33%;"> f. Telephone (DSN/Commercial (Include Area Code)) 000-5451 / (555) 000-5451 </td> </tr> <tr> <td style="width: 33%;"> g. UIC/CIN (as required) W3YTA </td> <td style="width: 33%;"> h. Training Support/Lesson Plan or OPORD (as required) OPORD XX-001 </td> <td style="width: 33%;"> i. Signature of Preparer DIGITAL SIGNATURE 123456789 </td> </tr> </table>							a. Name (Last, First Middle Initial) Public, Robert W.	b. Rank/Grade ILT / O-2	c. Duty Title/Position 3/5 Platoon Leader	d. Unit F Company, 1-3 CAB (Atk)	e. Work Email robert.w.public.mil@mail.mil	f. Telephone (DSN/Commercial (Include Area Code)) 000-5451 / (555) 000-5451	g. UIC/CIN (as required) W3YTA	h. Training Support/Lesson Plan or OPORD (as required) OPORD XX-001	i. Signature of Preparer DIGITAL SIGNATURE 123456789
a. Name (Last, First Middle Initial) Public, Robert W.	b. Rank/Grade ILT / O-2	c. Duty Title/Position 3/5 Platoon Leader													
d. Unit F Company, 1-3 CAB (Atk)	e. Work Email robert.w.public.mil@mail.mil	f. Telephone (DSN/Commercial (Include Area Code)) 000-5451 / (555) 000-5451													
g. UIC/CIN (as required) W3YTA	h. Training Support/Lesson Plan or OPORD (as required) OPORD XX-001	i. Signature of Preparer DIGITAL SIGNATURE 123456789													
Five steps of Risk Management: (1) Identify the hazards (2) Assess the hazards (3) Develop controls & make decisions (4) Implement controls (5) Supervise and evaluate (Step numbers not equal to numbered items on form)															
	4. SUBTASK/SUBSTEP OF MISSION/TASK	5. HAZARD	6. INITIAL RISK LEVEL	7. CONTROL	8. HOW TO IMPLEMENT/ WHO WILL IMPLEMENT	9. RESIDUAL RISK LEVEL									
 + -	Movement, emplacement, and teardown	Aircraft loading, air movement, and aircraft unloading	H	Detailed mission briefing, crew oversight of loading, detailed pax briefings.	How: SOP and Rehearsal Who: Air Mission Commander	M									
+ -	N/A	Limited visibility - Night - Dust/brownout	H	Ensure use of prevailing winds. Ensure NVGs are issued and used. Inverted Y used.	How: SOP and Rehearsal Who: Platoon Leader	M									
+ -	FARP operations	Enemy ground attack	EH	Security team attached to platoon. Construct hasty fighting positions upon arrival. Attack aircraft contact information on hand.	How: OPORD tasking and Rehearsal Who: Company Commander	M									

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Figure A-3. Sample DD Form 2977 for tactical aviation scenario (page 1)

	4. SUBTASK/SUBSTEP OF MISSION/TASK	5. HAZARD	6. INITIAL RISK LEVEL	7. CONTROL	8. HOW TO IMPLEMENT/WHO WILL IMPLEMENT	9. RESIDUAL RISK LEVEL
	N/A	Inexperienced, under-trained, and undisciplined Soldiers	H	Team more experienced Soldiers with less experienced Soldiers.	How: Team roster and Rehearsal Who: Platoon Leader	M
	N/A	Enemy artillery threat	H	Rehearse react to artillery fires. Ensure chemical detection and ID equipment is on hand. Silent FARP procedures. No white light use.	How: PCI and Rehearsal Who: Each Platoon Sergeant	M
10. OVERALL RESIDUAL RISK LEVEL (All controls implemented): <input type="checkbox"/> EXTREMELY HIGH <input type="checkbox"/> HIGH <input checked="" type="checkbox"/> MEDIUM <input type="checkbox"/> LOW						
11. OVERALL SUPERVISION PLAN AND RECOMMENDED COURSE OF ACTION The addition of a small security force is critical to the operation. Brigade S-3 has coordinated the addition. Rehearsal and communications is critical to mission success. Recommend approval based upon S-2 assessment of threat level to future aviation operations in the area.						
12. APPROVAL OR DISAPPROVAL OF MISSION OR TASK <input checked="" type="checkbox"/> Approve <input type="checkbox"/> Disapprove						
a. Name (Last, First, Middle Initial)	b. Rank/Grade	c. Duty Title/Position	d. Signature of Approval Authority			
Smith, John A.	LTC / O-5	Battalion Commander	DIGITAL SIGNATURE 123456789			
e. Additional Guidance: Mission will not depart without approved security team integrated, all members briefed, and rehearsal completed. Battalion Commander or S-3 will oversee the rehearsals.						

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Figure A-4. Sample DD Form 2977 for tactical aviation scenario (page 2)

TACTICAL FIELD ARTILLERY SCENARIO

A-8. This notional field artillery scenario, page A-9, is the basis for the sample DD Form 2977 illustrated in figures A-5 and A-6, pages A-12 and A-13. Only the first two pages of the sample form are shown.

Deliver Field Artillery Fires

Unit's Mission. Bravo Battery, 1st Battalion, 138th Field Artillery Regiment provides direct support field artillery fires to 3d Brigade Combat Team's (BCT's) movement to contact by 240400 Feb XX, to locate and destroy the Slinker Division of the Mudolvian Republican Guard.

Situation. It is now 211200 Feb XX. Bravo Battery has been in the southwest Asian theater since 29 December. The enemy's Slinker Division has been preparing and improving defensive positions, incorporating tank ditches, minefields, and other obstacle belts since late September. After almost four weeks of air strikes, intelligence estimates enemy combat power at 85 percent with full operational capability to employ persistent and nonpersistent chemical agents by 122mm artillery.

Conditions. Bravo Battery is at 102 percent personnel strength. Ninety-five percent of its Soldiers have never participated in a combat operation. In November, the battery received the new M109A7 Paladin. The first training exercise (firing) with this system was on 3 Jan. Gun crews are well-trained in crew drills, but section chiefs still need training on the new electronic equipment that came with the M109A7. Soldiers are acclimated to cool night weather in the desert. The predicted weather for 24 February is strong wind (over 30 knots) causing sand storms, with visibility less than 50 yards. No precipitation is predicted.

Facts. The commander has been in command for thirteen months, and Soldiers have fired over 3,000 rounds safely in the M109A6, but they have fired only 250 rounds from the M109A7. Based on training and experience, you know the following:

- The Slinker Division has excellent counter-battery acquisition systems and is well-trained in processing counterfire missions.
- The dust and wet weather has caused numerous failures of the electronic devices on the M109A7 and in your fire direction center systems.
- During the mission readiness exercise, evaluators found several performance issues within the fire direction center. As a result, the commander rates the battery's fire direction center as partially trained in manual fire direction procedures.
- Battery has not conducted collective training with other 3d BCT maneuver elements on breaching or reducing obstacles. The battalion has no organic engineer assets.

From experience at the Combat Maneuver Training Center and National Training Center, the leadership knows there will be little time for sleep or rest in a movement-to-contact operation.

Mission Analysis.

- Mission. Provide conventional artillery fires in direct support of 3d BCT's movement to contact.
- Enemy. The Slinker Division is at 85 percent combat power. It has been preparing and improving defensive positions and incorporating obstacles (tank ditches, minefields, and obstacle belts). It is fully capable of delivering persistent and nonpersistent chemical agents by 122mm artillery. It is well-trained in counterfire missions.
- Terrain. May encounter enemy obstacles. Severe winds (30+ knots), sandstorms, and dust may limit visibility to less than 50 yards. Dust and wind-driven rain can cause equipment malfunctions.
- Troops. Personnel strength is at 102 percent. Ninety-five percent of the Soldiers have never participated in combat operations. The fire direction center is partially trained in manual fire direction procedures. Crews are well-trained in crew drills; however, they lack experience with the new equipment. The Soldiers are acclimated.
- Time. Approximately three days to prepare.

Risk Assessment.

- Threat-based risks. Enemy obstacles; enemy counter-battery capabilities.
- Hazard-based risks. Inexperienced personnel; fire direction center training needed; Soldier fatigue; adverse environment.

Appendix A

DELIBERATE RISK ASSESSMENT WORKSHEET						
1. MISSION/TASK DESCRIPTION					2. DATE (DD/MM/YYYY)	
Movement to Contact, Direct Fires Support (24 February 20XX)					21/02/20XX	
3. PREPARED BY						
a. Name (Last, First Middle Initial)			b. Rank/Grade	c. Duty Title/Position		
Washington, John G.			CPT / 0-3	Battery Commander		
d. Unit	e. Work Email			f. Telephone (DSN/Commercial (Include Area Code))		
B/1-138th FA BN	john.g.washington.mil@mail.mil			000-5463 / (555) 000-5463		
g. UIC/CIN (as required)	h. Training Support/Lesson Plan or OPORD (as required)			i. Signature of Preparer		
W3YTA	OPORD XX-001			DIGITAL SIGNATURE 123456789		
Five steps of Risk Management: (1) Identify the hazards (2) Assess the hazards (3) Develop controls & make decisions (4) Implement controls (5) Supervise and evaluate (Step numbers not equal to numbered items on form)						
4. SUBTASK/SUBSTEP OF MISSION/TASK	5. HAZARD	6. INITIAL RISK LEVEL	7. CONTROL		8. HOW TO IMPLEMENT/ WHO WILL IMPLEMENT	9. RESIDUAL RISK LEVEL
N/A	Enemy obstacles	EH	Request engineer support. Pre-mission briefings with engineers to coordinate lane marking standards. Limit set at rehearsal.		How: Tasking and Rehearsal	H
	+ -				Who: Battery Commander	
N/A	Inexperienced personnel	H	Rehearse procedures for electronic and manual fire direction drills. Practice tactical displacement.		How: Crew drills and Rehearsal	M
	+ -				Who: Platoon Sergeants	
N/A	Adverse conditions Equipment damage/ failure	EH	PMCS for extreme conditions completed. Request additional stock of vulnerable electronic parts and air filters.		How: PCC and Parts request	M
	+ -				Who: Section Chiefs	

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Figure A-5. Sample DD Form 2977 for tactical field artillery scenario (page 1)

	4. SUBTASK/SUBSTEP OF MISSION/TASK	5. HAZARD	6. INITIAL RISK LEVEL	7. CONTROL	8. HOW TO IMPLEMENT/WHO WILL IMPLEMENT	9. RESIDUAL RISK LEVEL
<input style="width: 15px; height: 15px; margin-right: 5px;" type="button" value="+"/> <input style="width: 15px; height: 15px; margin-right: 5px;" type="button" value="-"/>	N/A	Limited visibility	H	Personnel issued and wear protective goggles. Decrease vehicle speeds; increase intervals.	How: OPORD and Rehearsal Who: Section Chiefs	M
	N/A	Soldier fatigue	M	Soldiers on proper sleep cycle and rested prior to SP. Rest when mission permits.	How: OPORD and Rehearsal Who: Section Chiefs	M
10. OVERALL RESIDUAL RISK LEVEL (All controls implemented):						
<input type="checkbox"/> EXTREMELY HIGH <input checked="" type="checkbox"/> HIGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> LOW						
11. OVERALL SUPERVISION PLAN AND RECOMMENDED COURSE OF ACTION						
Engineer support tentatively approved. Additional high failure rate parts and additional air filters delivered and distributed. Recommend approval with restrictions in case of engineer support loss.						
12. APPROVAL OR DISAPPROVAL OF MISSION OR TASK						
<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Disapprove						
a. Name (Last, First, Middle Initial)	b. Rank/Grade	c. Duty Title/Position	d. Signature of Approval Authority			
Public, William B.	COL / O-6	Brigade Commander	DIGITAL SIGNATURE 123456789			
e. Additional Guidance: Per division SOP, risk acceptance will be elevated to the Division Commander if engineer support is not provided.						

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Figure A-6. Sample DD Form 2977 for tactical field artillery scenario (page 2)

